Town of Silverton

Post Office Box 250 Silverton, Colorado 81433-0250

Telephone (970) 387-5522 Fax (970) 387-5583

RESOLUTION 2012-10:
ADOPTING FORMAL SAFETY POLICIES REGARDING LOCK-OUT/TAG-OUT PROCEDURES, TRENCHING AND EXCAVATION, AND CONFINED SPACE ENTRY.

WHEREAS, the Town Public Works staff on occasion engages in potentially hazardous activities with respect to which a set of clearly defined safety policies may have the effect of reducing the risk of bodily harm to such staff; and

WHEREAS, the Town's insurance underwriter, the Colorado Intergovernmental Risk Sharing Agency – CIRSA – noted in its 2010-2011 Loss Control Audit that the Town was lacking certain safety policies, which, if in place would improve the Town's overall audit score.

WHEREAS, the Town of Silverton Board of Trustees supports a safe working environment for all Town employees;

NOW, THEREFORE, BE IT HEREBY RESOLVED BY THE BOARD OF TRUSTEES OF THE TOWN OF SILVERTON THAT:

The policies pertaining to Lock-Out/Tag-Out procedures, Trenching and Excavation practices and Confined Space Entry guidelines included as Attachment A to this resolution shall serve as the official policies of the Town with respect to these activities henceforth and until such time as the Town Board identifies other such best practices in these fields.

THIS RESOLUTION was approved and adopted the 11th day of June, 2012 by the Board of Trustees of the Town of Silverton, Colorado.

Christine M. Tookey
Christine M. Tookey, Mayor
Town of Silverton, Colorado

June 11, 2012
DATE

ATTEST:

Brian Carlson, Town Clerk
Town of Silverton, Colorado

6/11/2012
DATE

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Town Safety Policies and Procedures

1.0 GENERAL SAFETY RULES

a. Employees shall be in a physical and mental condition to conduct normal working activities. The use of prescription medications shall be reported to your supervisor.
b. The possession or use of illegal drugs on Town property is strictly prohibited.
c. Personal protective equipment shall be worn at all times when required by your supervisor or by safety regulations.
d. Employee owned tools and equipment shall be kept in proper working condition before use, including proper electrical grounding and guards in place.
e. Good housekeeping practices shall be maintained at all times in Town work areas.
f. All employees should learn the location of the nearest fire extinguisher and first aid kit. Notify your supervisor immediately if any of this equipment is missing, or has been used.
g. Familiarize yourself with the proper use of fire extinguishers.
h. Report missing or damaged equipment immediately to your supervisor.
i. All equipment used during the work day shall be de-energized and secured at the end of the day.
j. Hazardous wastes such as waste oils, hydraulic fluids, cleaning fluids etc. shall be disposed in a proper manner. Contact your supervisor for proper disposal procedures.
k. All city speed limits and traffic signs shall be observed.
l. Report accidents immediately to your supervisor. Complete the necessary forms when reporting accidents.
m. Report any and all unsafe work situations to your supervisor.
n. Use caution when lifting. Bend knees, and keep back straight. Leg muscles, not your back, should do the work. When lifting heavy loads, use lifting devices such as forklift, pallet truck, etc. or get help from other employees. Do not lift large objects in high winds. DO NOT ATTEMPT TO LIFT LARGE/HEAVY LOADS BY YOURSELF.
o. Do not interfere with other employees while they are using power tools, motorized equipment, or when they are working near electrical lines and equipment.
p. Use equipment with safeguards that are adequately designed and intended for normal operations.
q. Wrist watches, metal wrist bands, rings, or other jewelry shall not be worn while working near moving parts of machines or energized circuits.
r. Clean clothes are essential in preventing skin irritations. Clothing saturated with solvents or other materials contacting the skin greatly increase the possibility of a skin irritation. Clothing saturated or impregnated with flammable liquids, corrosive substances, toxic materials, irritants, or oxidizing agents shall be removed and shall not be worn until properly cleaned. It is recommended that employees working in areas of high contamination keep an extra set of work clothes on the job.

2.0 LOCK, TAG AND TRY PROCEDURES

1. Review the specific **Lock, Tag and Try Procedure** of the particular location before beginning work.
2. All voltages shall be handled properly and safely.
3. Only qualified individuals will work on live or energized equipment.
4. When working on live equipment, work on only one (1) wire at a time and insulate all conductors which may come in contact with the live circuit.

5. Adequate personal protective equipment must be used when working on live circuits.
6. Use only **nonconductive** ladders and hard hats when working near energized circuits.
7. Treat all electrical equipment as though it was live.
8. Shut off power before removing guards from motor-driven equipment.
9. Keep the work area as dry as possible.
10. Fuses shall be replaced with fuses of the same capacity as the ones removed.
11. Finger rings, bracelets or metal watch bands shall not be worn when working with electrical equipment.
12. When opening disconnects, wear proper eye protection to shield the eyes from the flash or sparks.
13. When opening disconnects wear approved hand protection, such as linesman gloves.
14. After repairs, replace cover plates on lighting and power cabinets or electrical enclosures.
15. Restrict the number of people in the work area.
16. Inspect all electrical extension cords for signs of wear.
17. Extension cords shall not be used as permanent wiring in any situation.
18. Ground all electrical power tools.
19. Only qualified individuals shall be allowed to repair electrical equipment.
20. Do not pull on the cord to disconnect equipment.
21. All portable equipment shall be grounded by means of a three wire cord and polarized plug or wire leading from the frame of a machine to a good return ground. OSHA approved insulated portable power tools may be used. Grounding plugs shall not be altered.

3.0 CONFINED SPACE

INTRODUCTION

The term "confined space" is often misunderstood. The following introductory section is designed to be educational: it explains confined spaces and outlines their characteristics and hazards.

What is a confined space?

Unlike a trench or excavation, 'confined space' is not something easily visualized by the mind. Part of the reason for this is that a confined space can be almost anything. However, it does have some common components that we can define.

1. It is not designed primarily for human occupancy.

2. It has restricted entry and exit...hence, **confined**.

3. It may contain a hazardous condition.

This third component is particularly hard to pin down: these spaces just as likely may **not** contain any hazardous condition. The unknown element here is a particular hazard with confined space because it can lull people into a false sense of security. This uncertainty is particularly true with atmospheric hazards which may not be readily perceived by the senses. Besides atmospheric hazards, other hazards that may be encountered in a confined space can be mechanical, electrical, entrapment, and engulfment.

What are some typical confined spaces?

In a municipality, sewer lines and manholes are among the most commonly encountered confined spaces. However, other common confined spaces found in municipal operations might include:

- storage tanks and trash containers
- utility pits
- tank trucks and trash trucks
- storm sewers
- lift stations
- trenches

Again, however, a confined space may be any space meeting the above three criteria, and failing to recognize or identify a confined space can be a hazard in itself.

Why are confined spaces hazardous?

The word that best describes the hazardous nature of a confined space is: "uncertainty". Often the conditions within a confined space appear benign. Workers enter such spaces routinely to make repairs, perform maintenance work, check readings of gauges or meters, clean, etc. At such times, the conditions within the confined space may have been harmless. In many instances the worker has performed the task within the confined space repeatedly without incident. Thus, the worker is lulled into a false sense of security that the space will always be harmless, or that any necessary escape from the space will be quick and easy.

However, because the space is **confined**, toxic or flammable atmospheres may become contained and concentrated. Mechanical or electrical hazards may be in direct proximity to the worker where they can be mangled or electrocuted. The worker can become entrapped or engulfed by material within the space. Because, by definition, a confined space has restricted entry and exit, escape becomes difficult or impossible. The worker thus may be seriously or fatally injured.

Another reason confined spaces can be hazardous is that workers fail to recognize a confined space as being such. It is important for the municipality to first identify every confined space that it has as the first step in a confined space safety program.

What are some of the common hazards?

Atmospheric Hazards

Atmospheric hazards can vary depending on the type of confined space. However, one potential atmospheric hazard common to most confined spaces is oxygen deficiency. There are numerous conditions that can cause oxygen deficiency. Furthermore, insufficient oxygen is a condition that cannot be sensed by the worker. The end result may be that the worker enters the space, gradually becomes faint, passes out, and perhaps dies from this lack of adequate oxygen.

Another common atmospheric hazard in sewers and manholes is sewer gas or hydrogen sulfide. Because it is heavier than air, this gas settles near the bottom of the confined space. In small

concentrations, its typical 'rotten egg' smell is easily recognized. However, in higher concentrations it may not be smelled and can immediately cause unconsciousness. The worker can be dead in a matter of a few seconds.

Flammable or toxic atmospheres are another risk. Hydrogen sulfide, methane, carbon monoxide can all reach levels of explosive concentration. Petroleum products fumes can often be encountered in many confined spaces, as well as fumes of other flammable chemicals. A match, a spark from a hammer, static electricity, lighting a welding torch... all can easily cause an immediate explosion. Gases such as hydrogen sulfide and carbon monoxide are also very toxic and can cause death in relatively low concentrations.

Mechanical Hazards

Some confined spaces may contain mechanical equipment with sharp blades or other moving parts that can become accidentally energized and mangle a worker. Stored energy from springs or counterweights, for example, can be accidentally triggered causing the mechanical equipment to move suddenly and injure the worker.

Electrical Hazards

Like mechanical hazards, a confined space may also contain electrical equipment that can accidentally become energized and electrocute the worker.

Entrapment

Workers can become trapped within a confined space and die from exposure. The space can be unknowingly closed trapping a worker inside. Workers can drown inside a water line when an upstream valve is unknowingly opened. Some substances, such as asphalt, can cause entrapment due to their viscosity or "stickiness."

Engulfment

An example of this type of hazard would be a salt or sand bin where a worker walking on the surface of the substance in the bin can literally be swallowed by the motion of the material and suffocate.

In addition to these possible hazards, confined spaces may contain excessive heat causing heat exhaustion or can contain excessive noise requiring hearing protection. Dim or inadequate lighting may increase the likelihood of accident and injury.

What precautions are needed in confined spaces?

Identify All Confined Spaces

You should begin by identifying every confined space that workers may be required to enter within the scope of their work. Applicable employees then need to be informed of the existence, locations and dangers of these spaces by posting danger signs or other equally effective means.

Permit Entry System

Many injuries and deaths occur in confined spaces because a worker enters a confined space without telling anyone or because management fails to alert the worker to a known hazard that the worker may be unaware of. To prevent these tragic occurrences, a permit entry system needs to be developed. Such a system requires that a permit be completed for any worker to enter into a confined space. The permit forces both the worker(s) and management to recognize the confined space as being a hazard, identify the hazards that may be encountered upon entry, require any testing of the atmosphere, safety equipment, attendants, rescue equipment, etc. OSHA regulations and the Town Safety Regulations (provided at the end of this section) require the use of a permit entry system when entering confined spaces.

Testing

Testing for atmospheric hazards is also an OSHA requirement. Many hazardous atmospheres cannot be detected by our sense of smell. These include carbon monoxide, oxygen deficiency, methane, and large concentrations of hydrogen sulfide. Without testing, the worker's first clue to the presence of the hazard might be sudden collapse and subsequent death. Testing of a confined space thus becomes critical. Furthermore, since such hazardous substances tend to be heavier than air and displace air, testing of the confined space must be done **at the bottom** of the confined space especially, although the rest of the space also needs to be tested.

Safety Equipment

The permit entry system needs to address individual items of safety equipment needed for each confined space. This might include respirators, hard hats, safety harnesses, etc. This would also include emergency equipment necessary for any rescue such as a rescue tripod, winch, first aid kit, etc.

Monitoring

For prolonged periods of work in a confined space, provision for continued monitoring of the space may be necessary. Portable monitoring devices may be needed to detect and warn workers of changing atmospheric hazards.

Ventilation

One of easiest methods of reducing or eliminating hazardous atmospheres, particularly in manholes and sewer lines, is through ventilation. Mechanical blowers can eliminate many hazardous atmospheres if properly set up and used.

Observation

No worker should enter a confined space without a trained attendant standing by to summon help or operate a man-lift in the event of an emergency. The attendant is part of the permit entry system.

Training

As with any hazardous activity, training is essential to prevent accidents and fatalities. Equally important is the periodic use of emergency drills. Such drills help ensure that employees respond properly in emergency situations. Training should be documented and records maintained. Contact Risk Management or the insurance loss control representative for confined space training.

On the following pages are listed the safety regulations that apply to all Town operations when a confined space must be entered. If you are working in one of these areas, consult this program for more detailed instruction.

CONFINED SPACE SAFETY REGULATIONS

1. Any vessel entered shall be properly blinded and/or isolated before work begins.

2. The vessel will be clean, gas free and contain adequate oxygen concentration before entry is permitted.

3. An **Entry Permit** shall be issued before anyone enters a permit-required confined space.

4. A **Confined Space Attendant** shall be assigned to the work area. The attendant will be adequately trained in the duties of a **Confined Space Attendant** as defined in OSHA regulations.

5. A **Confined Space Attendant** shall not leave the area when personnel are working inside a confined space.

6. The potential hazards of a confined space will be determined prior to entering the confined space.

7. All personnel entering the **confined space** will be adequately trained.

8. Personnel entering the confined space will be briefed by their supervisor as to the risks of the operation.

9. The confined space atmosphere shall be monitored on a regular basis. The area should be retested after breaks or lunch periods.

10. Do not enter a confined space unless you are properly attired to do so.

11. Contact a supervisor if assistance is required. **Never enter a confined space when unsure of the hazards.**

12. Rescue involving a confined space **shall not be attempted** unless the rescuers are qualified and properly trained and equipped for confined space rescue.

13. Do not attempt rescue without appropriate personal protective equipment.

14. Immediately report any confined space incident and/or accident to your **supervisor.**

15. If unsure or further information is needed, consult OSHA Standard 29 CFR 1910.146.

ACKNOWLEDGEMENT

I, the undersigned, recognize and understand the Town safety policies established herein and acknowledge that I will adhere to such policies to the best of my abilities in carrying out the day-to-day functions of my employment with the Town:

NAME	SIGNATRURE	DATE
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